

Southern Pacific Railroad Carlin Shops  
Foot of 6th Street  
Carlin  
Elko County  
Nevada

HAER No. NV-26

HAER  
NEV  
4-CARL,  
1-

**PHOTOGRAPHS**  
**WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

Historic American Engineering Record  
National Park Service  
Department of the Interior  
San Francisco, California

**HISTORIC AMERICAN ENGINEERING RECORD**

**SOUTHERN PACIFIC RAILROAD CARLIN SHOPS**

**HAER No. NV-26**

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NEV  
4-CARL,  
1-

**Location:** North side of Union Pacific (former Southern Pacific)  
Railroad main line at foot of 6th of Street, Carlin, Nevada.

UTM: 11-575325-4507080  
Quad: Carlin East, Nevada, Provisional Edition, 1985  
(Engine Stores Building, HAER-NV-26-A)

UTM: 11-575350-4507095  
Quad: Carlin East, Nevada, Provisional Edition, 1985  
(Oil House, HAER-NV-26-B)

UTM: 11-575300-4507090  
Quad: Carlin East, Nevada, Provisional Edition, 1985  
(Roundhouse Machine Shop Extension, HAER-NV-26-C)

**Date of Construction:** 1868-1925.

**Engineer:** Central Pacific Railroad Engineering Department (1868-  
ca. 1889); Southern Pacific Railroad Engineering  
Department (ca. 1890-1925).

**Present Owner:** Union Pacific Railroad

**Present Use:** Vacant.

**Significance:**

The Central Pacific First Transcontinental Railroad is a segment of the western half of the first transcontinental railroad, built from Sacramento, California to Promontory Summit, Utah between 1863 and 1869, where it joined the Union Pacific Railroad which had built west from Omaha. For the purpose of the current project, the first transcontinental railroad was found likely to be eligible for the National Register of Historic Places at the national level of significance under Criterion A for its significance in transportation history, in uniting the East and the West, and in the development of the West. The railroad's period of significance is 1869 to 1945, from the line's completion in 1869, through the years of its role in the settlement and development of the West, to the conclusion of the railroad's achievements in World War II. The Carlin Shops, a contributive component of the larger historic property, also appears to meet National Register Criterion A at the local level for its association with the founding and subsequent development of Carlin. The Carlin Yards and Shops were the headquarters of the railroad's Humboldt Division, and are significant for their continuity of railroad focus. From original construction in 1869 until the present, Carlin has remained an important facility, providing running repairs to locomotives, crew changes, re-icing of refrigerator cars, machine shop services, and rail yard services.

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## **I. DESCRIPTION**

The Southern Pacific Railroad Carlin Shops comprises the three remaining buildings of the Carlin Shops. Construction of the Carlin Shops began in 1869 with the erection of a wooden roundhouse and machine shop. Over the following eighty years, activities at the Carlin Shops saw the construction of many more buildings as well as the demolition or other loss of earlier buildings, until the end of the use of steam locomotives in the mid-1950s began the final decline of the facility leading to the demolition of all but the three remaining structures. These buildings are recorded herein as the Engine Stores Building (HAER NV-26-A), Oil House (HAER NV-26-B), and the Roundhouse Machine Shop Extension (HAER NV-26-C). These buildings are described as follows:

The Engine Stores Building dates to at least the early 1870s, and is a one-story unreinforced brick masonry building whose gable roof is clad in corrugated metal. The building measures 100'10" by 27'3". The building is axially aligned roughly southwest-to-northeast. A "cold" joint near the center of the long sides reveals that this building was built in two phases. Though evidence visible on both exterior and interior indicate that the southwest half appears to be the earlier building, materials, workmanship and detailing indicate that original and addition were likely built within a short period as the earliest available maps show the building in its present configuration. All original door and window fenestration throughout both halves of the building is segmental-arched. No original exterior doors remain; extant iron hinge pins indicate that doors and windows originally had exterior iron fire shutters. A four-course corbel course supports the eaves and wraps around the ends to form gable returns; the corbel course is also carried up under the gable verges. A two-course string course at plate height on the end walls visually forms the bottom of a pediment. Walls are laid up in 5/1 common bond (five stretcher courses per header course) in soft common brick bedded in lime mortar. Original windows are 4/4 double-hung wood sash. The interior is currently divided into four rooms, used for vehicle storage, work space, and miscellaneous storage. Historically, however, the building was divided and used, southwest to northeast, as follows: Boiler and Engine Room, Warehouse Room, Offices, Cooper Shop, and Library (early 1880s); uses in 1890 and 1897 were the same, except that the Library space was then Vacant; in 1902 the building was depicted as two large rooms, simply labeled "Engine Stores", with a small projection at the west corner of the southwest end; in 1905 no interior cross-walls were indicated, the building was still shown as "Engine Stores", and there was a lean-to indicated against the northwest wall at the southerly end of the building; finally in 1927 the former Engine and Boiler Room was used as the Oil House, with the other four rooms shown as the Stores Department. There is no ceiling in the former Engine and Boiler Room or the former Warehouse Room, revealing that the roof is carried on iron trusses supporting longitudinal iron purlins. The trusses are pin-connected, and utilize turnbuckled rods for lower chords, and double-tapered cruciform-sectioned compression members. Bricked-in former doors can still be discerned in interior walls, and the former Office still has its milled tongue-and-groove wood wainscot with chair rail.

The Oil House is a simple one-story wood frame, gable-roofed building measuring 24'2" by 27'11-1/2", with a rear lean-to addition measuring 8'2" by 24'2". It is clad overall in corrugated metal. Like the Engine Stores Building (HAER NV-26-A), it is axially aligned roughly southwest-to-northeast. The building has a fixed 18-light window centrally placed in the southwest façade, with a five-panel door at right; this façade has been altered by the placement of an overhead, garage-type vehicular door at the left side. The rear elevation and lean-to are windowless. There is a single 15-light fixed window placed just under the eaves in the northwest side near the rear (northeast) end wall, and two 18-

light fixed windows similarly placed in the southeast side. There are corrugated metal-clad doors in each side of the lean-to. Doors and windows are within simple surrounds, and the windows have projecting wood sills. The interior of the building is a single room, with walls clad in drywall, and currently used for miscellaneous storage. The interior of the lean-to could not be accessed. Originally built around 1890 to store lubricants, the Oil House gained its lean-to addition some time between 1902 and 1927, and has been used for general storage since at least 1927.

Built as part of the new Roundhouse in about 1905, the Roundhouse Machine Shop Extension is a one-story unreinforced brick masonry building with a flat roof hidden behind end parapets. Axially aligned generally southwest-to-northeast, the southwest end of the building shared a common wall with the Roundhouse (no longer extant), with large doors allowing the movement of locomotives from the Roundhouse into the interior of the Machine Shop. Of common brick construction, the building has an exterior of buff-colored face brick laid up in 5/1 common bond (five stretcher courses per every header course), and rests on a concrete foundation. Measuring 139'11-1/4" by 57'6", the building has a series of pilasters dividing its side elevations into corbeled bays within which are pairs of large segmental-arched windows, each of which originally held 12/12 double-hung windows in wood sash. The projecting brick sills of these windows, carried on corbel courses, joined to form a continuous water table course. Similarly, pilasters divided the northeast end of the building into three corbeled bays with segmental-arched windows. Many of the windows in both sides and in the northeast end of the building have been modified, as with partial infilling and conversion to doorways. The southwest end of the building was windowless, with personnel doors adjacent to each side wall, and a pair of large metal-clad doors that could be opened to admit locomotives from the Roundhouse into the Machine Shop for repairs. The interior of the building was divided into four large rooms which were used (southwest to northeast) for: Offices, with the larger space subdivided into Enginemen's Room, Office, Store Room and with the track from Roundhouse to Machine Shop leading through the overall space and separating the aforementioned rooms from the Lavatory; Machine Shop, with an Engine Pit below the track leading in from the Roundhouse; Blacksmith Shop; and Boiler Room, containing the stationary boilers that supplied steam for the engines as well as for steam heat and hot water; the Engine Room housing the engines driving the overhead belt-driven shafts that powered tools throughout the facility; and a coal bunker. The boilers drew their water supply through an eight-inch pipe from a well near the northeast end of the building, and exhausted to a free-standing smokestack (no longer extant) that stood adjacent to the north corner of the building. In the interior, metal-clad fire doors separate Boiler Room from Engine Room. The roof is carried on steel trusses, with the trusses in the Office and Machine Shop having cutouts in the lower chord above the track in the floor, in order to provide clearance for the smokestacks of locomotives being moved into and out of the Machine Shop. Interior partition walls have brick pilasters with offset tops. The building stands vacant today, boilers and engines removed, all but a few small machine tools gone, used only for minor storage.

## **II. HISTORICAL INFORMATION**

### **Central Pacific and Southern Pacific**

(The following background discussion of the planning and development of the transcontinental railroad was taken verbatim from the National Register of Historic Places Registration Form for the Transcontinental Railroad Grade, Box Elder County,

Utah, prepared by Gail VanMoorleghe for the Bureau of Land Management, Salt Lake City District Office, May 1994.)

"The history of the Pacific Railroad (as it was originally called) development and construction began in the 1820s, about the time the first network of canals was completed in the eastern United States. During this period railroads began to spread throughout the East. By the 1850s they had spread into the Midwest and Mississippi River. The desire to continue the expansion and to eventually span the continent with a Pacific Railroad grew and eventually became a great public debate.

"The desire was not all grounded in the desire to connect the two parts of the country, rather promoters of such a railroad were primarily interested in and vocal about its commercial importance, even beyond this continent. As historian Robert Utley notes:

The settlement of the Oregon question in 1846, the discovery of gold in California in 1848, and the admission of California to statehood in 1850 swelled the population of the Pacific Coast. With commerce almost wholly dependent upon the long, slow journey around Cape Horn or across the Isthmus of Panama, both East and West foresaw a large and lucrative trade speeding by rail across the continent.

"The proponents saw the potential for diverting much of the Europe to Asia trade from ship to rail, but the most coveted objective was trade with China, Japan, and other Asian areas.

"For the United States government these reasons were good, but most important in its final decision to actively promote and financially support this project were its potential effects upon domestic political and economic matters. From the government's perspective the railroad had the potential to more quickly end hostility with the American Indians and significantly reduce the expense and speed up transportation of mail and government supplies. In addition, the outbreak of the Civil War in 1861 made it clear that the bonds between California and the Union needed to be strengthened. Also, the Trent Affair, which almost caused another war between the United States and England, revealed the defenseless condition of the Pacific Coast. Though the construction of the Suez Canal in 1869 destroyed the potential value of the U.S. as a rail bridge for trade between Europe and Asia, the railroad was to fulfill all of its other expectations and more.

"The real efforts to initiate construction began in the 1840s with promotion by a New York merchant in the China trade named Asa Whitney. His obsession with this project led him to write articles, lecture and talk with influential politicians. By the 1850s most nationally prominent politicians were in favor of such a plan with a measure of federal aid. But agreement could never be reached on an eastern terminus, a problem which was compounded by the lack of information about the merits of the different possible routes that could be used. This led to a series of fairly comprehensive Pacific Railroad surveys carried out by the Army Engineers between 1853 and 1855. The results of these surveys (two northern and two southern routes) were politically objectionable to both the Northerners and the Southerners. Thus, the issue remained unresolved. It took the Civil War, which removed the southern objections to a northern route, strong lobbying by Theodore Judah, a California railroad engineer, and many eastern promoters to convince a beleaguered Congress to pass a bill in 1862 throwing the support of the United States government behind the effort. President Lincoln supported the effort and signed the bill

into law on July 1, 1862. This act authorized the Central Pacific Railroad and Union Pacific Railroad and Telegraph Company to build the railroad from Omaha to Sacramento.

"Construction of the railroad began in Sacramento on January 8, 1863 and in Omaha on December 2, 1863. The initial construction efforts were pathetic. The Civil War sent supply rates soaring and limited available labor in addition to drying up capital investment potential. By February 1864 only 18 miles of rail had been laid in California and none were laid out in Omaha until the spring of 1865. The adverse conditions of the time forced the railroads to ask for further assistance from the government, a request which was granted in the form of the Act of 1864. This act virtually doubled the resources available to the companies and ensured the project's completion.

"Between the years of 1864 and 1869 a total of 1,775 miles of rail were laid to complete the railroad link across the continent. This effort was perhaps the largest single construction project ever undertaken within the country. The task laid before both railroads was enormous, both logistically and financially....

"Despite the fact that the U.S. government offered lucrative subsidies, these covered only half of the necessary capital needed to build the railroad. As a result, private investment was critical for both the Union Pacific and Central Pacific railroads. Both companies devised the means to solve this dilemma by creating a number of indirectly held companies which carried out the construction work, but were not legally controlled by the federal legislation that directed the efforts of the two main railroad companies.

"Construction of the transcontinental line was fraught with exceptionally difficult obstacles that sorely taxed the technological capabilities of the day. The Central Pacific spent four years surmounting the Sierra Nevada Mountains. The company faced the necessity of putting in deep fills and rock cuts, bridging deep canyons with trestles, and cutting through solid granite for 15 separate tunnels. The Central Pacific did not reach Reno, Nevada until June 19, 1868. Reno lay 154 miles from the beginning of the track in Sacramento. The 536 mile distance from there to Promontory Summit in northern Utah, however, was completed in less than 11 months."

On April 3, 1868 the Central Pacific finished the line through Truckee, 119 miles from Sacramento. California Historical Landmark No. 780-6, located in Truckee, notes the feat as follows:

While construction on Sierra tunnels delayed Central Pacific, advance forces at Truckee began building 40 miles of track east and west of Truckee, moving supplies by wagon and sled, and Summit Tunnel [Note: not to be confused with the present 1925-built Summit Tunnel] was opened in December 1867. The line reached Truckee April 3, 1868; the Sierra was conquered. Rails reached Reno June 19, and construction advanced eastward toward the meeting with Union Pacific at the rate of one mile daily. On May 10, 1869, the rails met at Promontory (Utah) to complete the first transcontinental railroad.

The largely-Chinese construction crews of the Central Pacific had succeeded in surmounting the Sierra and crossing the desert, a tremendous engineering and human achievement, whose cost was not only monetary, but also represented an unknown number of injuries and the loss of workers'. Some writers have termed the construction of the first transcontinental railroad "the greatest engineering accomplishment of its era."

When the California State Park Commission approved the listing of the transcontinental railroad as a State Historical Landmark in 1962, the landmark application stated:

The historical significance of the First Transcontinental Railroad can hardly be over-estimated. Our nation was for the first time united with bands of steel. As a result, California and the West were developed economically, politically and socially at a pace not made possible by earlier means of transportation.

The National Register nomination for a segment of the transcontinental railroad in Utah, listed on the National Register in 1994, further delineated the railroad's significance:

The completion of the Transcontinental Railroad on May 10, 1869 is one of the nation's greatest accomplishments that effected one of the most monumental impacts on America's development. ...The construction of the Transcontinental Railroad is one of the most written about sagas in American history. A feat of such magnitude was unimaginable at the time, but it was a vital effort needed to physically bind the still-young nation together and permanently solidify its territory.

The driving of the last spike touched off a national celebration, but left the Central Pacific's Leland Stanford, Mark Hopkins, Collis P. Huntington, and Charles Crocker--the so-called Big Four--little time to relax. As a group they were in debt, and the expected demand for railroad services did not quickly materialize. The far-distant Suez Canal, completed the same year as the transcontinental railroad, drew off trade from the Far East; business in and with the state of Nevada decreased as the silver mines played out; and perhaps most importantly, California's population was not yet large enough or prosperous enough to provide a terminal market for the railroad. The Big Four had built ahead of the frontier, and so reverted instead to using the railroad to open the West to settlement to build their own markets.

Over the ensuing decades the Central Pacific both built new lines and bought existing lines. In 1870, the Central Pacific took control of the Southern Pacific (originally incorporated to build south from a connection at San Jose with the pioneer San Francisco and San Jose Rail Road--itself already acquired by the Central Pacific). By the late nineteenth century the two company names were largely interchangeable. The company was finally reorganized as the Southern Pacific. Within California, Southern Pacific lines joined the state's new communities to the transcontinental railroad, and through it to the rest of the nation. Land grants received for railroad construction had left the Southern Pacific with vast tracts of land in California and other western states, and it built new towns on those lands. Using a huge public relations campaign, the Southern Pacific promoted settlement of the West in general and California in particular. In the Southern Pacific's program, newcomers could ride the transcontinental railroad to California, buy a plot of land in a town laid out by the railroad, and begin a business that would receive its materials and ship its products on the Southern Pacific.

The National Register nomination for a branch of the Union Pacific in Utah described how western railroads affected settlement and population growth:

The influence of the railroad in encouraging settlement to the west cannot be understated [sic]. The remarkable expansion in the 1880s is shown in the comparison of census population maps of 1880 and 1890. In 1880 the frontier was still seen in definite form. By 1890 the strips of settlement united the east with the west. Railroads also encouraged immigration. Completion of the transcontinental lines was paralleled



by the building of an immense number of smaller lines and feeders in the 1880s. Railroad mileage increased over 40,000 miles in the 1880s, more than what had been in existence prior to that time. "The whole significance of the eighties in western railroad history was their importance as a period of transition from pioneer conditions to those of the present day."

Two major settlement and development patterns resulted from railroad expansion. First, the extension of a rail line to an existing settlement brought population growth that expanded villages into towns and towns into cities. Production of coal, iron ore, lead, bauxite, grains, cattle, or timber increased dramatically because the railroad could ship larger volumes faster and at lower cost. Cities and towns that became rail hubs became the equivalent of inland ports. Second, new towns quickly developed along the rail because of the availability of efficient shipping. No longer dependent on the arbitrary location of rivers, these new communities could be built wherever a rail line existed or was feasible. Railroads became so important to the development of the nation that the railroad companies often came to have greater power than did local and state governments, a fact that was all too often true of the Central Pacific/Southern Pacific in California.

*The Reader's Encyclopedia of the American West* began its entry on railroads with the following unequivocal statement regarding their significance:

Railroads were the most important factor in the rapid settlement of North America. Still the most efficient and versatile of all forms of inland transportation, the railroad was indispensable in the settlement of most of the West.

The Southern Pacific promoted California agriculture, provided teaching of better farming methods for farmers, and sent display trains around the country both to attract farmers westward as well as to create more demand for western agricultural and manufactured products. Southern Pacific's *Sunset* magazine attracted both tourists and settlers with promotional articles featuring California's attractions. In order to build California as a desired destination and increase its own markets, the railroad built luxury hotels along its lines for wealthy tourists, and supported creation of Yosemite National Park.

By 1896 the Southern Pacific controlled 7,300 miles of railroad line in California as well as 3,500 miles of water-borne shipping, giving it a near-monopoly of California's rail (and to some extent, river and ocean). In this guise the railroad became notorious as "The Octopus," exerting political control over state government from both Sacramento and from Washington, D.C.

California, like so many of her sister commonwealths at the turn of the century, had only the shadow of representative government, while the real substance of power resided largely in the Southern Pacific Railroad Company. To a degree perhaps unparalleled in the nation, the Southern Pacific and a web of associated economic interests ruled the state.

In 1900 Collis P. Huntington, last survivor of the Big Four, died, closing a period of penurious management of the railroad that had seen the physical plant decline under lack of maintenance or improvement. Through a series of financial maneuvers Edward H. Harriman, owner of the Union Pacific Railroad, acquired a controlling interest of Southern Pacific stock and succeeded Huntington as President of the Southern Pacific in

September 1901. This merger gave Harriman and the Union Pacific control of 9,500 miles of railroad between New Orleans and San Francisco (the Southern Pacific Sunset Route) and between San Francisco and Ogden (the Southern Pacific Overland Route), and having a virtual gridiron of lines in California and Texas. Harriman, with an eye toward increasing the profitability of his new acquisition, immediately initiated a system-wide program of improvement and modernization of the Southern Pacific and its equipment. These efforts, budgeted at between \$30 million and \$40 million, included:

Double-tracking much of the original Central Pacific line over the Sierra and through Nevada, bypassing or enlarging original tunnels to improve alignments and allow the use of larger modern locomotives and cars. Harriman contemplated electrifying the Sierra line (this never progressed beyond the planning stage), and planned the Summit Tunnel that was not to be built until 16 years after his death;

Lengthening sidings over the Sierra, allowing the dispatching of longer trains. Half of the sidings were inside the 46 miles of snowsheds that largely enclosed the railroad between Blue Cañon and Truckee; extending the snowsheds required seven million board feet of lumber;

Centralization and expansion of new shop and yard facilities in Roseville, California and Sparks, Nevada, largely replacing the more numerous smaller shops along the early transcontinental line;

Replacement of early bridges system-wide with modern, standardized designs;

Initiating construction of the Natron Cutoff in Northern California and Southern Oregon to replace the arduous line over the Siskiyou Mountains, including enlarging shops at Dunsmuir, California;

Building of the Lucin Cutoff across the Great Salt Lake in Utah to eliminate the circuitous route along the north shore of the Lake;

Construction of the Bay Shore Cutoff, whose tunnels and double-track main line between San Francisco and San Bruno shortened both distance and operating times between San Francisco and San Jose;

Construction of the Dumbarton Cutoff across the south end of San Francisco Bay;

Extension, in a joint effort with the Santa Fe, of the Northwestern Pacific Railroad from Willits to Eureka, California;

Construction of powerhouses and electrification of suburban commuter lines in the Oakland area, with the intention of electrification of all main lines around San Francisco Bay (this latter never occurred);

Controlling, after the efforts of all others had failed, a break in the banks of the Colorado River that threatened to permanently inundate the Imperial Valley in California;

Building of a new company hospital in San Francisco;

Purchasing or building modern, heavier locomotives;

Construction of new steel passenger cars in the company's own Sacramento Shops;

Construction of new depots system-wide, many in California in the Mission Revival style to symbolize the state and promote tourism;

Promoted colonization of Southern Pacific owned or served irrigated lands in Arizona, California, and Oregon;

Construction of new lines into Mexico, and extension of existing lines within Mexico;

Standardization of everything from track spikes to locomotives among the many railroads under his ownership or direct control;

Introduction of heavy articulated locomotives purchased specifically to conquer the grades of Donner Summit;

Opening, in the wake of the 1906 San Francisco earthquake and fire, a new ticket office in the Palace Hotel, boasting 3,500 square feet of floor space; Circassian walnut woodwork; a large circular counter measuring 142 ft long in the center of the room; large tables and comfortable chairs; large photographs of "the wonders of California" on the walls, and a frieze running entirely around the room showing Lake Tahoe, the Sierras, the California missions, Mount Shasta, Riverside, and more; and an immense map of the United States measuring 18 ft high by 52 ft long, scaled at 6.25 miles to the inch, painted on the west wall of the room, which took three artists more than 6 months to paint.

Unfortunately, Harriman's premature death in 1909 meant that he never saw most of these efforts reach fruition. And completion of many of the major projects begun under his direction was delayed by federal litigation.

In an effort that began during his life but that ended after his death, the federal government ended Harriman's merger of the two giant railroads with its dissolution as a violation of the Sherman Anti-Trust Act. Working under the provisions of the Hepburn Act of 1906, in January, 1907 the Interstate Commerce Commission began to investigate the relations among the western railroads. On the basis of the evidence discovered, on February 1, 1908 the federal government filed a suit in equity in the United States Circuit Court, Eighth District, against the Union Pacific Railroad and its auxiliaries, as well as against the Southern Pacific Railroad, Northern Pacific Railroad, Great Northern Railway, the Atchison, Topeka and Santa Fe Railroad, the San Pedro, Los Angeles & Salt Lake Railway, the Farmers' Loan & Trust Company, Jacob H. Schiff, Otto Kahn, James Stillman, Henry H. Rogers, Henry C. Frick, William A. Clark and, not coincidentally, against Edward H. Harriman who had control of, interests in, or relationships with, all of the foregoing.

The government's basic allegation was that the individuals named conspired to effect a virtual consolidation of the Union Pacific and other transcontinental lines with the intent to unlawfully restrain transcontinental commerce. The government asked the court find this conspiracy a violation of the Sherman Anti-Trust Act, and to "perpetually enjoin Union Pacific, and its auxiliaries from purchasing, acquiring, receiving, holding, voting, or in any manner acting as owner of any shares of the Southern Pacific, Northern Pacific,

Great Northern, Atchison, or Salt Lake line." The government contended that under independent control, ten percent of the total Union Pacific and Southern Pacific traffic would be competitive. That ten percent, they pointed out, included California traffic.

In their turn the defendants argued that Union Pacific was not a competitor for California traffic. Lawyers for the railroad asserted that its line to Portland and boats to San Francisco gave it no control over such traffic, pointing out that this route consumed several days more time than Southern Pacific routes, and could not operate at lower rates without prompting Southern Pacific to retaliate by turning a richer eastbound business over to Union Pacific's competitor Denver and Rio Grande at Ogden. For this reason, they stated, the Southern Pacific absolutely controlled California traffic before the merger. Surely, then, "purchase of a substantial holding of Southern Pacific stock by Union Pacific amounted, therefore, to mere advancement of Southern Pacific's gateway from Ogden to Omaha, and in no wise altered competitive conditions."

Initially, it appeared that the courts would uphold the merger. In early 1911, using the United States Supreme Court's "rule of reason," the Eighth Circuit Court found that the merger of the Union Pacific and the Southern Pacific did *not* violate the Sherman anti-trust law. The court concluded that the Union Pacific could not reach California without either building a new line or acquiring the Central Pacific (which by this time was wholly owned by the Southern Pacific) which had the line extending to San Francisco from its junction with the Union Pacific at Ogden, Utah. Since, the court reasoned, the acquisition of the Central Pacific could not be achieved without the acquisition of the Southern Pacific as a whole, the merger was allowable. The court found that the merger was chiefly one of connecting rather than competing lines. Though attorneys for the federal government brought out the fact that Union Pacific and Southern Pacific both reached Portland on their own rails and asserted that the merger would serve to stifle competition to and from Portland, and to and from San Francisco, the court found for the defense that competition between the two railroads for San Francisco was "largely mythical." It found that there was no increase of rates or deterioration of service evident due to the merger, and thus could not find that the merger was an "unreasonable" restraint of trade." The railroads had won the first battle, and the industry felt that the merger of the Harriman Lines was safe from dissolution. But this was but the first battle in what was to become a virtual war.

The federal government never faltered in the wake of this decision, and continued to press its suit through the court system. By 1913, trade journals reported a different story. Bowing to government pressure and legal reverses, the Union Pacific and Southern Pacific proposed to dissolve the merger, with each retaining a part of the Central Pacific. Union Pacific's possession of its portion of the transcontinental line would reach San Francisco and as far south as Fresno. Union Pacific also proposed to retain half of San Pedro, Los Angeles & Salt Lake, which would give it a line from Salt Lake to Los Angeles. Further, Union Pacific would retain control of both the Oregon Short Line and the Oregon-Washington Railroad & Navigation Company, by which it could reach throughout the Northwest, to Portland, Tacoma, Spokane, and Seattle. Southern Pacific, for its part, would retain a 99-year lease to that portion of Central Pacific that constituted part of its line from Portland to San Francisco. Southern Pacific would also enjoy trackage rights over Northern Pacific's line from Portland north to Puget Sound, and its steamships would ply between Los Angeles, San Francisco and the north Pacific coast.

In California, the Progressives under Hiram Johnson had taken office; they took up the question of railroad regulation, and undertook the task of "kicking the SP out of politics."

Though the Southern Pacific continued to have great influence in the state, the early years of the twentieth century saw it lose the political dominance it had previously enjoyed.

Reeling from the cost of the Harriman improvements and the government-ordered dissolution, Southern Pacific saw its profits cut sharply first by the opening of the Panama Canal and then by the outbreak of World War I in 1914; however wartime traffic and industry brought increased revenues. These were offset by the U.S. entry into the war in 1917 which brought federal control of the nation's railroads under the United States Railroad Administration in late 1917 in order to coordinate the heavy wartime rail traffic. The U.S.R.A. held control of some railroads as late as 1920, and returned most to their owners in a state of deferred maintenance and disrepair.

Most railroads, Southern Pacific included, had not fully recovered by the time they entered the Great Depression. Still, the lessons of World War I and the lean years of the Great Depression which saw the railroads making do with less prepared them for exemplary service in World War II. While remaining in private control, the railroads became virtual arms of the military, hauling 90% of the military's freight and 97% of the troop movements. The Southern Pacific's original transcontinental line over Donner Summit carried much of the materiel and troops destined for the Pacific Theater. In contrast to the financial losses of World War I under government control, the railroads' World War II efforts garnered nearly three million dollars a day in income tax revenues for the federal government.

In 1944, *Railroads at War* told of the historic contributions of the railroads, from initially uniting the nation with construction of the transcontinental railroad to the then-present movement of freight and troops in wartime:

America's railroads made the union of the states a physical fact, a practical reality. Today they are the great inner lifelines of that union's survival in the holocaust of world war: an indispensable base behind the tremendous charges under which the tyrant attackers across both oceans are now crumbling.

Farseeing Americans in the early days of the republic, looking from the westward side of the Alleghenies only as far as the Mississippi, though it might take five or ten centuries to settle those vast stretches. Railroads brought population and statehood all the way to the Pacific in a matter of decades.

World War II loaded our railways with a job whose hugeness and complexity almost baffles imagination. Failure could have been fatal. They have succeeded magnificently.

Even allowing for wartime rhetoric, the railroads accomplished remarkable feats. The Southern Pacific alone eliminated 27 pre-war passenger trains and rapidly converted to handling military needs, building new bridges, lengthening passing sidings, and laying hundreds of miles of heavier rail, all to increase its capacity to serve the growing volume and weight of military traffic. With the induction of much of the younger labor force into military service, Southern Pacific soon faced a severe labor shortage as nearly 20,000 employees left for military service just as the railroad's workload burgeoned. The railroad lowered minimum and raised maximum age limits for its workers, lengthened working days, canceled vacations, imported workers from Mexico, and hired women for jobs previously restricted to men, all to compensate for the shortage.

As mentioned previously the original Central Pacific route--the first transcontinental railroad line--proved crucial to the railroad's war effort, and carried an enormous amount of traffic that would have astounded its original builders. In 1943, a traffic count revealed no fewer than 73 trains and helper engines passing through Colfax daily. "Ton miles" of freight carried over the line increased from an already-record high of 545.5 million in to a stupendous 1.6 billion in 1944. The Southern Pacific found itself handling trains for the Civilian Conservation Corps and the Coast Guard, as well as hospital trains with war wounded. In addition to moving troops and war supplies, the Southern Pacific also moved 125 "alien specials," transporting trainloads of Japanese Americans to internment camps in the interior, where they were incarcerated. Nevertheless, Southern Pacific's substantial accomplishments in World War II service far overshadowed its use in this unforgettable demonstration of war hysteria and racism. At the end of the war, the railroad received commendations for what was termed its "finest hour."

The Southern Pacific's Overland Route, the original transcontinental Central Pacific line, remained the keystone of the system. Over the years, however, the transcontinental railroad line has undergone a number of changes. The Harriman improvements of the early twentieth century resulted in realignments such as the 1904 Lucin Cut-off in Utah shortening the route. Heavier steel rails and heavier bridges replaced the originals, and tunnels were enlarged as the line was improved to handle the more massive modern rolling stock, and much of the route was double-tracked. Centralization of shops in Roseville, Sparks, and Ogden combined with development of more efficient motive power to diminish the importance of smaller yards and shops such as those at Carlin. In recent years, rail traffic on the original transcontinental line declined sharply, with a 50 percent or more drop between the 1980s and 1990s, leading to further closures of unnecessary facilities systemwide.

### **Carlin**

Before the first transcontinental railroad passed through Carlin the site was on the emigrant train route to California and the gold fields, and period maps indicated the site contained hot springs. Mining activity in the area began as early as 1859 with the discovery of coal deposits east of town (following a good deal of effort that peaked by 1874, the coal mines closed by 1895). Originally located in Lander County, Carlin became a part of Elko County when the state legislature created the latter in March 1869, an effort that indirectly involved the newly-arrived Central Pacific Railroad. The legal description of the boundaries of the new county included the following reference:

It shall lie East of a line drawn North and South through a point on the Central Pacific Rail Road track three miles West of the machine shop of the Central Pacific...situated in the town of Carlin; and North of a line drawn East and West through the most northerly portion of the military Post or Camp known as Camp Ruby.

The location was also the central point for Ben Holiday's Overland Stage, and was also a supply point for prospectors and ranchers in those pre-railroad years. From Carlin the trail eventually stretched north to the silver mines at Tuscarora following that strike in 1871 (the mines eventually produced more than \$40 million), and south to Pine Valley, and trains of pack mules met supply needs.

When Central Pacific Railroad crews reached Carlin meadows on December 20, 1868, their surveyors immediately began laying out a town site, though one J.A. Palmer had

already settled there in July; the opening of a post office immediately followed the arrival of the railroad. While some consider Carlin the oldest town in Elko County, records indicate that Central Pacific surveyors were also busy laying out town lots in Elko at the same time and delays when the tracks reached Elko allowed that town to grow faster than the other railroad camps. The railroad towns were little more than camps early-on. A description of Carlin in 1869 noted, "The town is composed of wood and canvas buildings and contains about 600 inhabitants. It has several hotels and eating-houses, chief of which is the Railroad House, before which the trains stop."

In 1870 the *Elko Independent* wrote in an article titled "Central Pacific Railroad Company's Works at Carlin":

The principal attraction at Carlin is the substantial and extensive works of the Central Pacific Railroad Company, J.F. Curtis has supreme control of the works, and is withal a gentleman thoroughly competent to manage the intricate business that he has charge of. At the present time, there are sixteen locomotives in the round house and a machine shop, eight of them being used daily on the division which embraces a line of 240 miles of road. The different shops are well appointed with every facility for repairing and even building locomotives. Every kind of machinery necessary to turn out in perfect order the most complicated job of work is at hand ready to be put into use at a moment's warning.

With the establishment of rail yards and shops at Carlin, the town became the headquarters of the Central Pacific's Humboldt Division. The sixteen-stall Roundhouse and Machine Shop employed fifty men by 1871, a number of who were Chinese workers tasked with manually turning locomotives on the turntable, polishing locomotives, and other menial work. This spurred development of the town, with the railroad remaining the dominant factor in the economic, physical, and social growth of Carlin. Through the years the Central Pacific (and later the Southern Pacific) remained the principal employer in Carlin. Among the early settlers of Carlin were Chinese railroad laborers, who lived in an area that came to be called "Chinese Gardens," the name taken from the vegetable gardens planted by the Chinese. Population grew to 800 by 1871, by which time six passenger trains served the town daily, and residents could travel to San Francisco--583 miles distant--for \$36.75. Reflecting the rapid changes on the railroad, Carlin had been an Eating Station on the Central Pacific in 1869 but by 1871 faster schedules meant that trains only paused long enough to change crews. Passengers could alight long enough to enjoy the "choicest brands of liquors and cigars" from the nearby Carlin Hotel. The traveler for whom Carlin was a destination found a town now boasting many stores, saloons, restaurants, a church, and a school.

By 1874 the town boasted the railroad roundhouse, machine shops, telegraph office, and express office, as well as four stores, one hotel, two saloons, one jail, one doctor, and six other businesses. The Chinese presence remained high, with perhaps 300 living there in 1876; the railroad remained their chief employer, but others worked as cooks in hotels, operated boarding houses or laundries, or farmed vegetables in the rich Humboldt bottom lands. The arrival of the railroad also stimulated establishment of stage and freight lines connecting with area mines and nearby towns. Carlin's role as an important railroad division point and locomotive shop ensured that it was one of the most important towns along the line of the transcontinental railroad in Nevada, a position of importance it was to hold until the establishment of the centralized shops in Sparks in 1904, during the regime of E.H. Harriman.

## **The Carlin Shops**

Central Pacific crews completed initial construction of the Carlin Yards on January 25, 1869. As platted, the yards were at the center of town. From the outset, the Carlin Shops complex was both centrally-located within the railroad reservation and central to the functioning of the railroad's Humboldt Division. The railroad arranged the buildings of its shop complex in three general classifications: the Shops themselves, where locomotive and car maintenance took place; Administration, from which management and supervisory functions took place; and Support, the utilitarian storage buildings. Elsewhere in the Carlin Yards, beyond the shops themselves, were living quarters for the Train Master and Freight Agent, a Clubhouse for trainmen and other employees, freight and passenger depots, ice houses and icing docks, loading platforms, and other structures.

The first railroad structures on the site were the Roundhouse and Turntable, a Machine Shop measuring 82 feet by 130 feet, a Car Shop measuring 60 feet by 140 feet, and a Blacksmith Shop measuring 40 feet by 60 feet, all north of the tracks, and a Freight Depot south of the tracks and somewhat east of the other buildings. These early railroad buildings were of wood construction throughout, including roofing, which left them susceptible to fires during those years of wood-burning locomotives; indeed, Central Pacific's 1,100-book library in Carlin's Engine Stores Building was lost to fire in 1879. The Roundhouse sheltered the locomotives between runs and allowed light maintenance, while the Turntable allowed crews to turn the locomotives to the direction in which they would be operated. Sited near the Roundhouse, the Machine Shop provided for the fabrication and repair of locomotive parts, while the Car Shop handled maintenance and repair of both freight and passenger cars.

By the early 1880s the railroad had added more buildings, befitting Carlin's importance as a division point. Now the Carlin Shops also had a Forge Shop, where iron and steel locomotive parts could be repaired or manufactured from raw stock. A Coal Bin was situated close by the Forge Shop, Machine Shop, and Engine Stores Building; its small size and proximity to these functions suggests that it supplied fuel for forges, boilers, and heating stoves, rather than locomotive fuel. A shed abutting the southwest end of the Machine Shop spanned four tracks, and sheltered locomotives in for heavy repairs. Closer to the Roundhouse, the Sand House provided sand for locomotive use--in sand domes for traction, and to be occasionally scooped by the fireman into the firebox to clean soot deposits from boiler fire tubes and flues; the sand may also have been used for castings in the forge or machine shops. A 25,000-gallon Water Tank supplied both shop and locomotive needs, and there were a number of ancillary storage buildings for all the parts and pieces needed to run a major terminal and division point. There were also crew facilities that included a Bath House, Section House, Bunk and Cook houses for the Chinese, a Superintendent's House and Master Mechanic's House. It is likely that both halves of the brick Engine Stores Building (HAER-NV-26-A) were built during the early 1870s, for by the early 1880s it was in its present, enlarged form. At that time it housed, from southwest to northeast in its five rooms, a stationary boiler and engine, warehouse space, an office, a cooper's shop, and a library. In addition the Passenger Depot now sat on the south side of the tracks, opposite the Roundhouse, as did a small Ice House for supplying coolers on passenger trains and in locomotives and cabooses.

By 1890 the original Car Repair Shop was gone, probably the victim of fire. A new car repair shop located at the northeast end of the shops complex replaced it, with a nearby lumber shed storing the materials needed for car repairs. The extant Oil House (HAER-NV-26-B) was in place by this time, for the storage of lubricants rather than fuel oil.



Seven years later, in 1897, Sanborn maps reveal that the forge and shed had been removed, and that the library in the Engine Stores Building was vacant. The Carlin Shops remained in this configuration at least through 1902. By this time, however, major changes to the old Central Pacific line were underway, the work of Southern Pacific's new president, Edward H. Harriman.

Harriman had assumed control of then-bankrupt Union Pacific in 1897, and three years later had restored that railroad to profitability. At about the same time, Collis P. Huntington, last of the Central Pacific's "Big Four" builders, had arranged a major stock transaction that resulted in the Central Pacific becoming a subsidiary of Southern Pacific. Following Huntington's death in 1900, Harriman gained control of a majority of Southern Pacific stock, and was elected president of the railroad. He immediately began a massive rebuilding effort to modernize the system. This era saw major line improvements, standardization of virtually all aspects of the physical plant of Harriman's railroads, and improvements of stations, yards, and shops systemwide. A 1905 Southern Pacific map of the Carlin facilities reveals the extent of improvements there.

Under Harriman, Carlin received a new and larger roundhouse and turntable, adequate to handle the larger locomotives being introduced, located just north of the original roundhouse and turntable. The new roundhouse had a large machine shop (HAER NV-26-C) attached at its northeast end, with a service track able to handle entire locomotives leading from within the roundhouse into the interior of the machine shop. Relocating the roundhouse resulted in the removal of most of the other original shop buildings, with only the Engine Stores Building, Oil House, and the early Machine Shop remaining. The Carlin Shops saw only minor changes for the next two decades: construction of a clubhouse for entertainment and relaxation of train crews, changes of use in the Engine Stores Building to include oil storage, and addition of a lean-to to the rear of the Oil House and its conversion to general storage.

Harriman also saw to the expansion of icing facilities for refrigerator cars in Carlin. Ice harvesting at ponds just east of town had been a railroad-related local industry since the 1890s, with ice shipped throughout the system. Development of the refrigerator car for the shipment east of California fruits and vegetables, however, required icing facilities spaced along the lines. Construction of an ice plant at Carlin began in 1907, and Pacific Fruit Express (jointly owned by Southern Pacific and Union Pacific) required nearly 45,000 tons of ice annually at Carlin to re-ice an average of 300 refrigerator cars per day during the shipping season. In 1917 the *Southern Pacific Bulletin* wrote:

The Pacific Fruit Express Company recently purchased 30 acres of land adjacent to the Southern Pacific track and built a large pond, for cutting ice, and warehouse, for storing ice. 30,000 lbs will be stored there at the end of this season. Water from the Humboldt is diverted here and store until it freezes and is then cut to a thickness of 16 in. Ice is also cut and stored along the Truckee at Polaris, Boca, Floriston and Iceland, with a crop running up to 125,000 tons. Pacific Fruit Express ices deciduous trains at Roseville, at a Truckee River point, and at Carlin on the SP and other points on the way East.

Eventually, a mechanical ice plant replaced the ice ponds and ice harvests. The Carlin icing facilities continued in use until the main plant burned in 1950; made obsolescent by more efficient refrigerator cars, the plant was not rebuilt and icing at Carlin ceased the following year.

When the United States Railway Administration required the Southern Pacific and Western Pacific to operate in double-track fashion from 1918 to 1921, it required the two railroads to, as conditions permitted, use only one station for both roads in each town. At Carlin, managers made arrangements so that trains of both lines passed through the Southern Pacific yards, and at Elko through the Western Pacific yards. At Carlin, both lines used the Southern Pacific station, while at Elko they used the Western Pacific station. In late 1920, during this period of double-track operation, the Southern Pacific built more than two miles of new yard tracks as they rearranged and extended the yards at Carlin and Wells, an effort that also required shifting some 2,600 feet of mainline track and 3,700 feet of existing yard tracks.

A general railroad strike by shop men in 1922 brought some turmoil to Carlin. At 10:00 A.M. on July 1, between 40 and 50 men walked off the jobs at the Southern Pacific Carlin Shops, as did a like number of men at the Western Pacific's Carlin Shops. The strikers included boiler makers, coppersmiths, electricians, pipefitters, blacksmiths, and car men. Local railroad management was of the opinion that the strike would not last long and that, if it did, government intervention would settle matters. As if the effects of the strike were not enough for the small railroad town to endure, in late July rumors began to circulate regarding the government's efforts to "unmerge" the Central Pacific from the Southern Pacific, a move that would have been devastating to Carlin had it occurred. Late in July, a locomotive with a damaged wheel was left at Wells, Nevada. When repair men arrived to fix the problem, strikers drove them off, leading railroad management to summon the sheriff from Elko to quell the problem. Before the seven armed guards arrived, however, a single repair man arrived from Ogden, fixed the locomotive, and departed. The guards arrived to find they were not needed, but their presence obviously stirred local resentment: needing food, they were unable to buy or beg supplies in Wells and returned hungry to Elko. The engine was moved to the Carlin Shops without further incident.

By August, a companion walkout by firemen and switchmen was beginning to affect train service, and many feared a complete disruption of the Southern Pacific. While trains from the west were still getting through, by August 12 strikers had so tied up the Ogden yards that trains from the east were effectively stalled at that point. President Warren G. Harding had entered the fray at the federal level, while at the railroad division level Southern Pacific officials in Ogden were trying desperately to resolve the grievances that had caused the train crews to strike. Time proved management wrong on their first point--the strike lasted until October--but correct on the second as federal efforts finally brought the walkout to an end.

In 1930 the Southern Pacific built a Club House in Carlin for its employees. Located on Seventh Street between Railroad Street and Hamilton Street, the facility had sleeping rooms, a barber shop, restaurant, and card tables. Known to train crews as "The Beanery," the building burned in 1980 while it was being demolished.

Following the downturn in business that was a result of the Great Depression, the Carlin Shops and Yard boomed during World War II, employing many of the 832 people who lived in Carlin in 1940. Operating round the clock, the Carlin Shops gave work to as many as 100 men in the roundhouse, machine shop, car department, and store department. Fifteen to eighteen trains per day passed through Carlin during the war years, and servicing stops were accomplished in as little as twenty to thirty minutes. If a locomotive required longer servicing, crews cut it off the train and replaced it with another taken from the roundhouse. With wartime rail traffic through Carlin heavy and

running on tight schedules, the town had problems with soldiers hopping off trains to go to bars near the tracks. This led to orders to close the bars when troop trains arrived. Local children made money by running to the store to buy candy bars and snacks for soldiers who leaned out of train windows.

Later, technological changes in railroad motive power brought change to Carlin, as did the rise in automobile travel. By the late 1940s Carlin was as important for its services to tourists on the Victory Highway (Highway 40) as it was for its significance to the railroad. The first diesel locomotives arrived in 1949, and 1953 saw the end of the steam locomotive on the Southern Pacific in Carlin, leading to piecemeal dismantling of the roundhouse, and the Southern Pacific reconfigured the yard as more trains simply ran through. With the roundhouse gone the turntable, no longer needed, was finally removed in 1993; its pit was filled but remains at least partially intact, as portions of its perimeter wall can still be discerned.

In addition to providing employment for Carlin's residents, the railroad also supplied water and power to the town. Before the town built its own power plant in the 1920s, the railroad supplied power. It also supplied water from Carlin Spring; evidence of this may still be seen in a sign on the Roundhouse Machine Shop Extension (HAER-NV-26-C), and residents could draw softened hot water from a tank adjacent to the Roundhouse (the railroad softened water to avoid buildup of mineral deposits in locomotive and stationary boilers). Waste steam from the Shops also heated the town's three churches.

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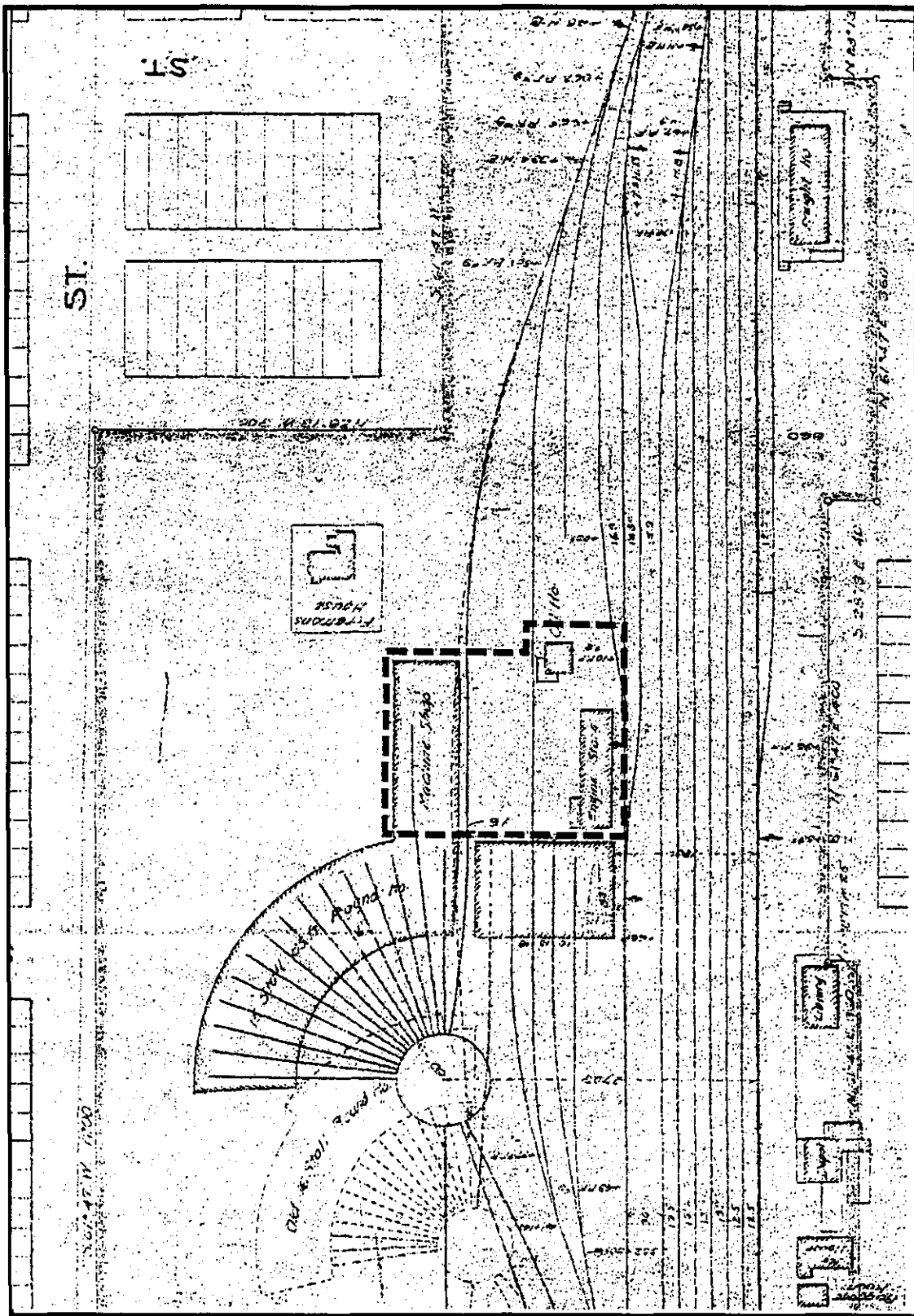
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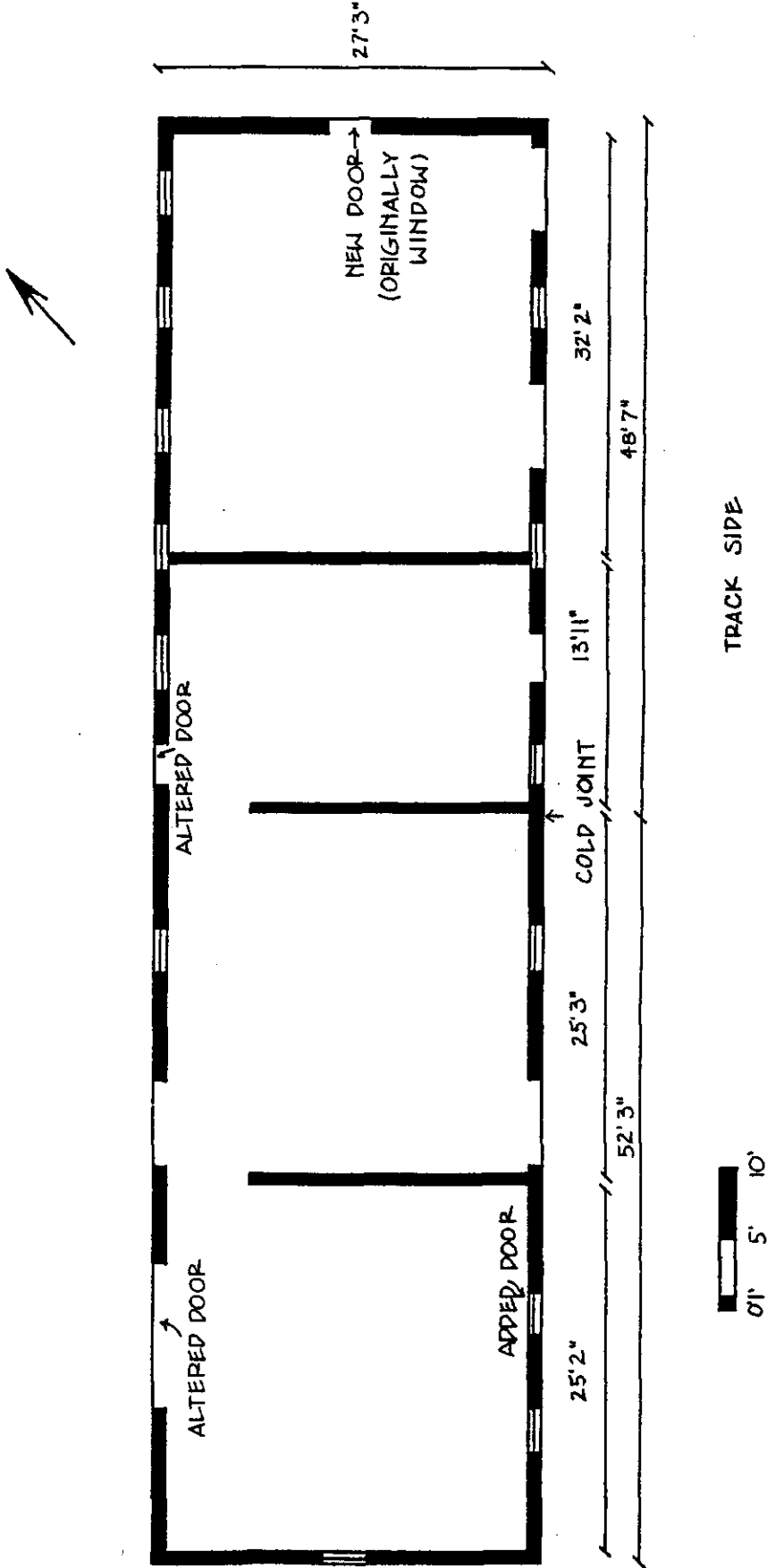
#### **IV. PROJECT INFORMATION**

As a result of the 1996 merger of the Union Pacific and Southern Pacific Railroads, a federal undertaking under the jurisdiction of the Surface Transportation Board of the U.S. Department of Transportation, the Union Pacific Railroad has determined that the remaining former Central Pacific/Southern Pacific shop buildings at Carlin, Nevada are not required and will be abandoned. The remaining buildings, built between ca. 1870 and 1905, are contributing elements of the National Register-eligible Southern Pacific Carlin Shops Historic District. Inasmuch as abandonment leading to deterioration or demolition could cause an adverse effect to the district, Union Pacific has elected to record the district for the Historic American Engineering Record.

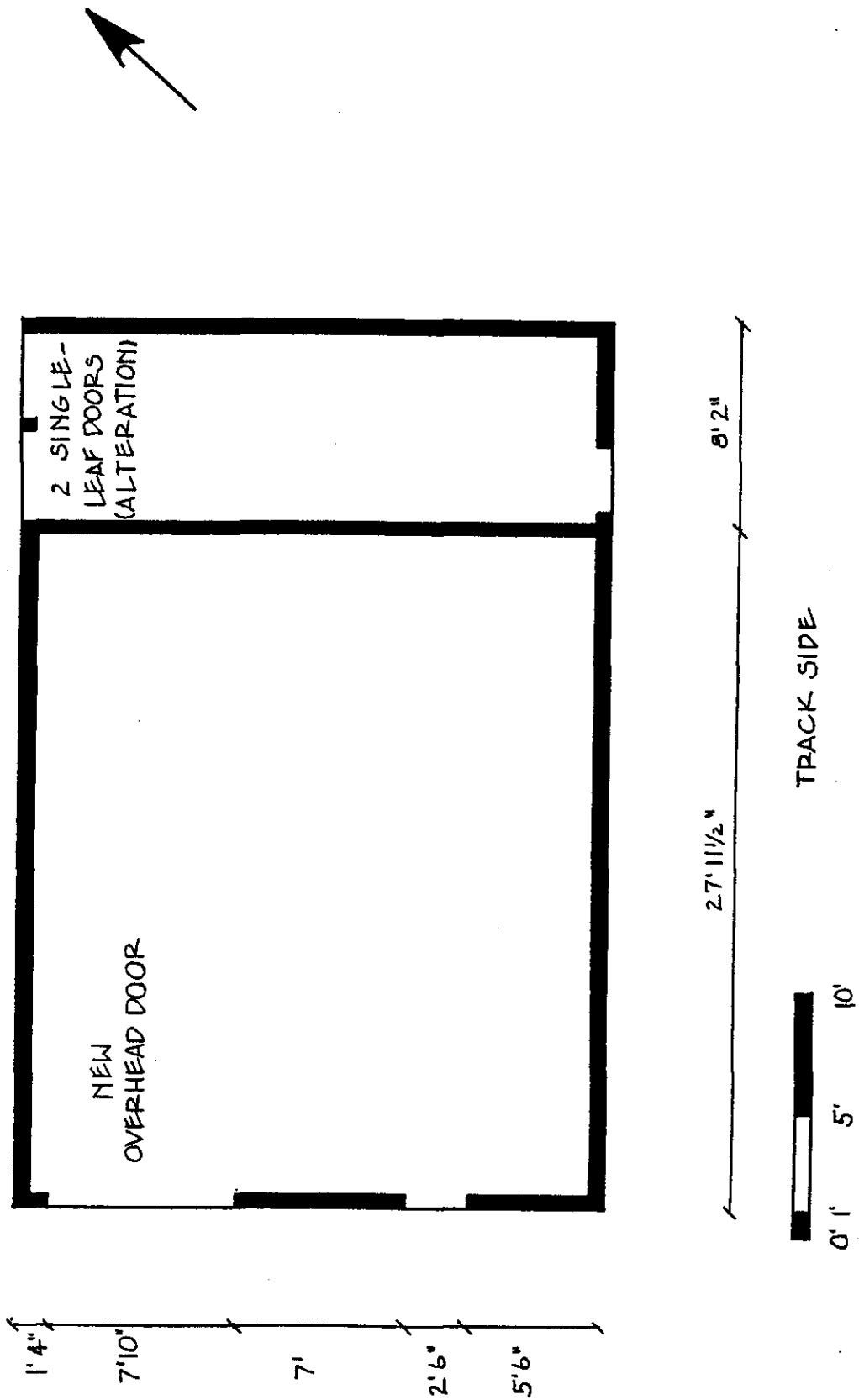




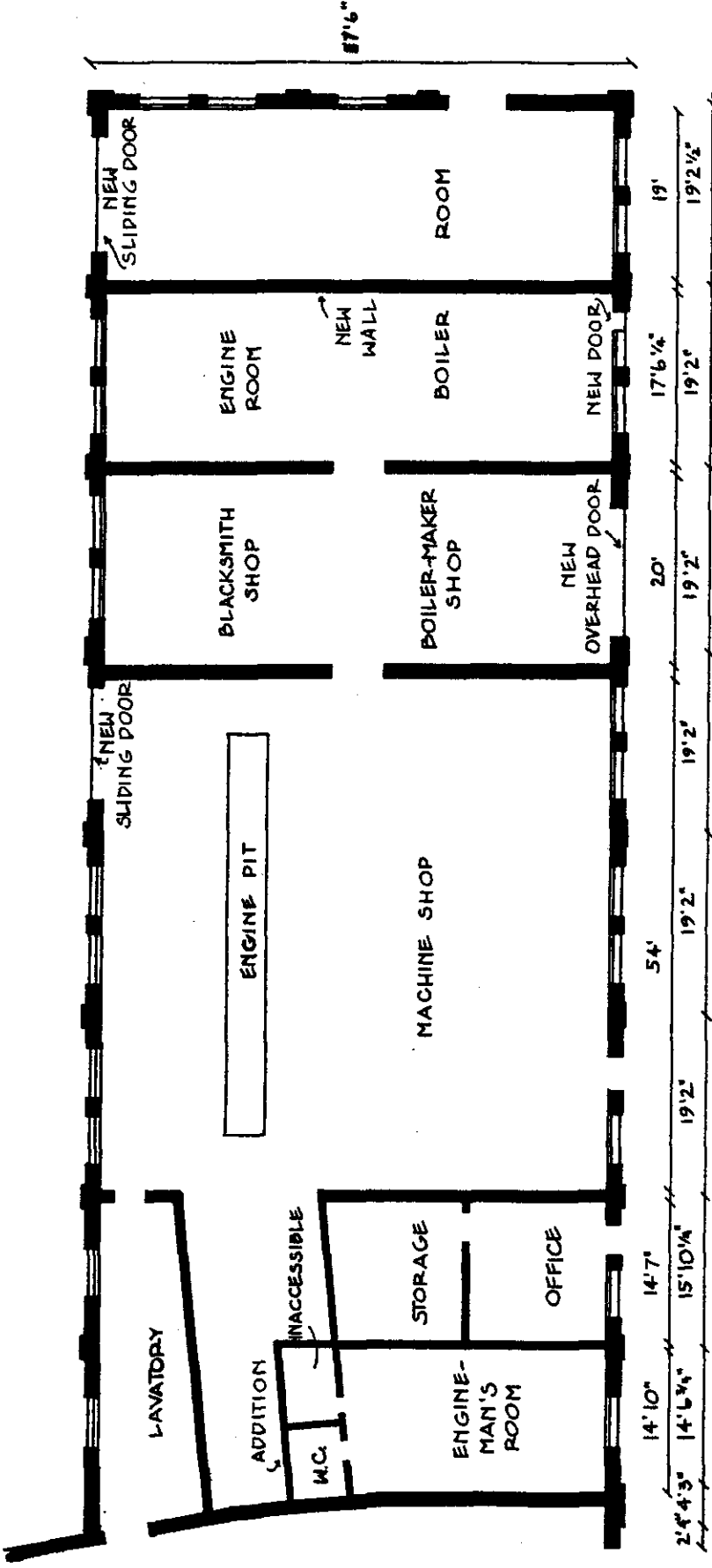
Current site plan, Carlin Shops, superimposed on 1905 Shop plan.



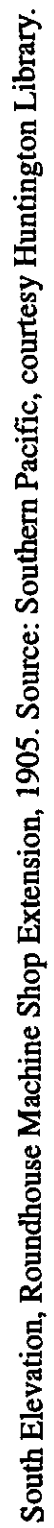
Engine Stores Building

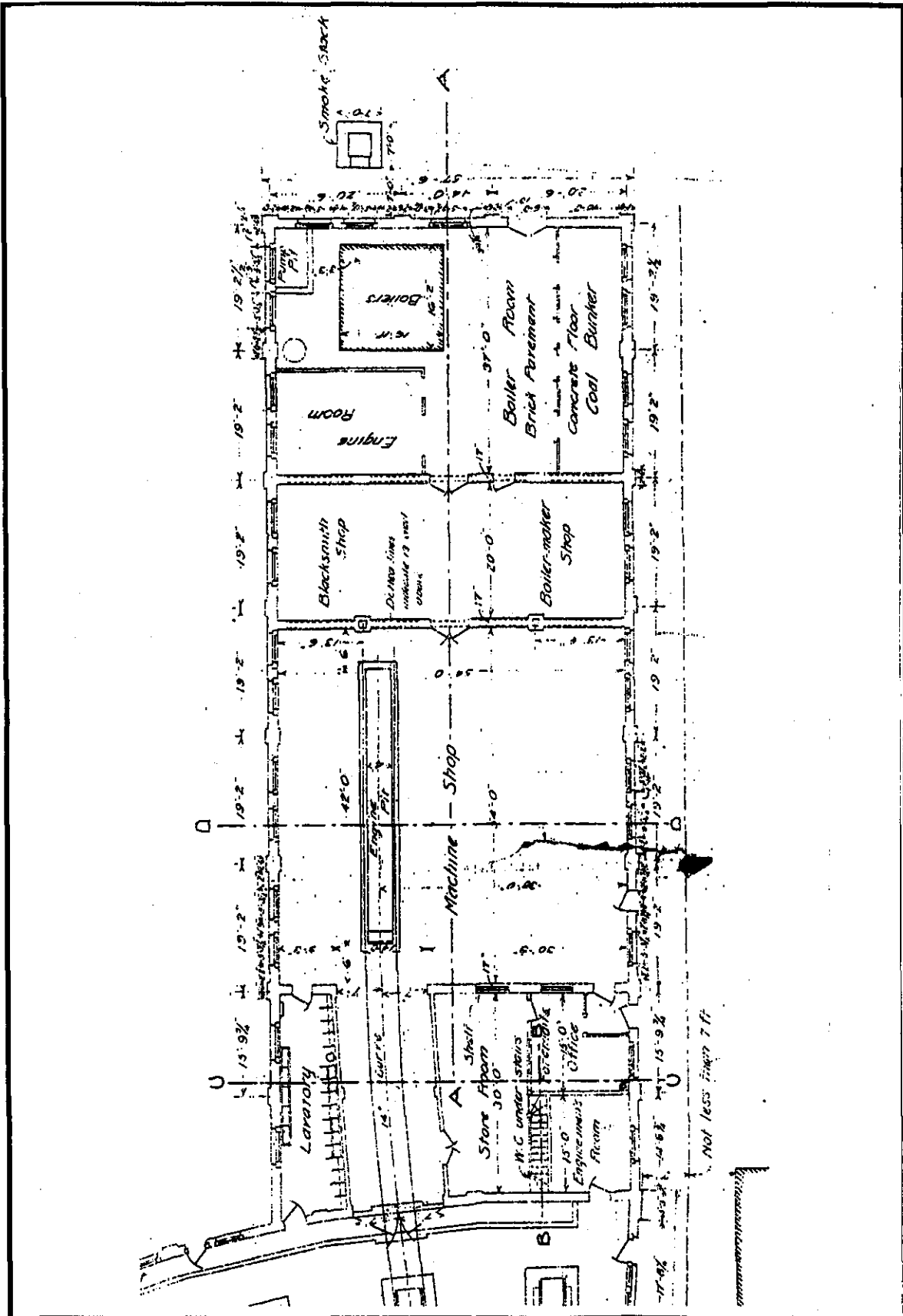


Oil House

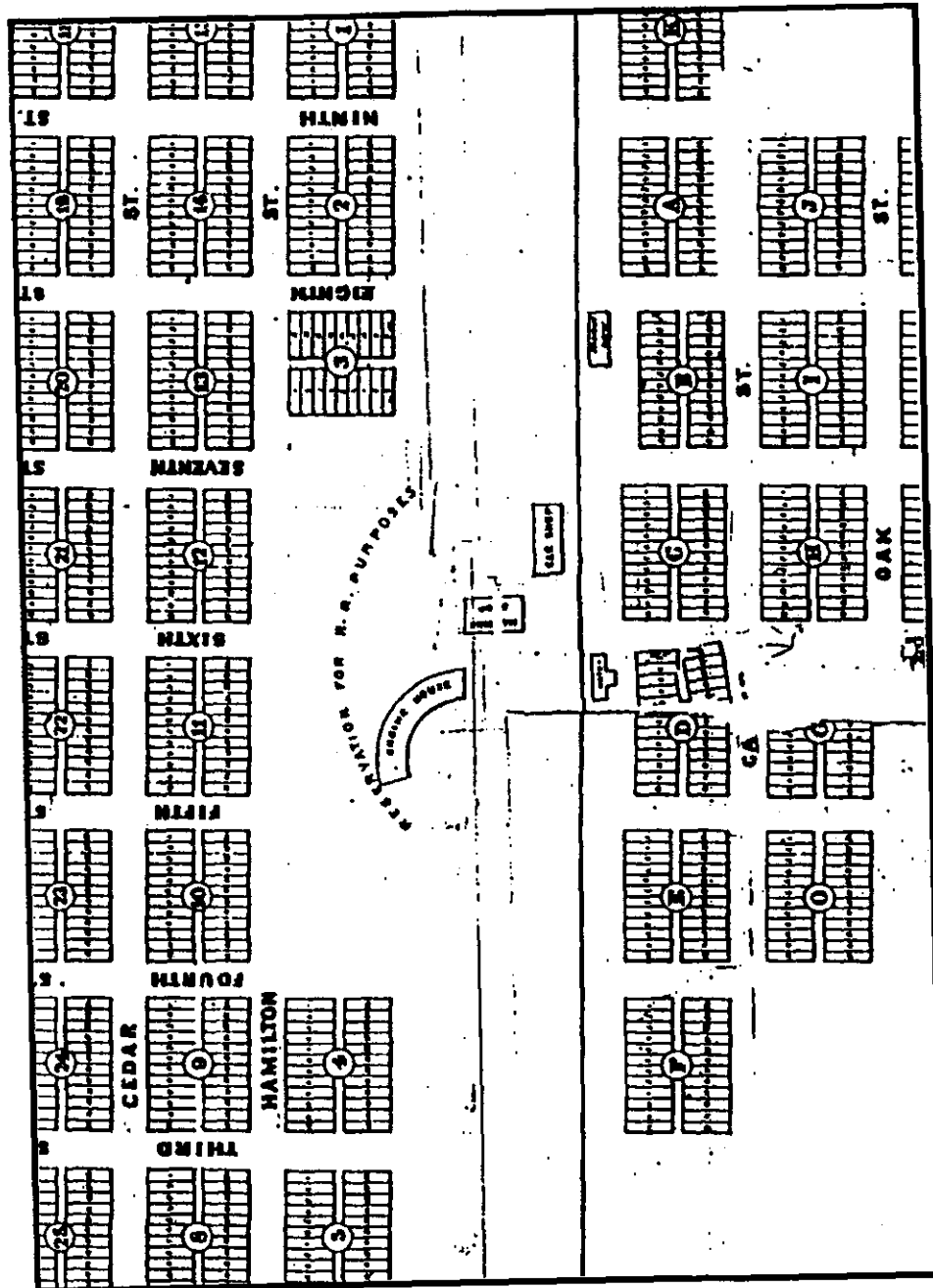


Roundhouse Machine Shop Extension





Floor Plan, Roundhouse Machine Shop Extension, 1905. Source: Southern Pacific, courtesy Huntington Library.

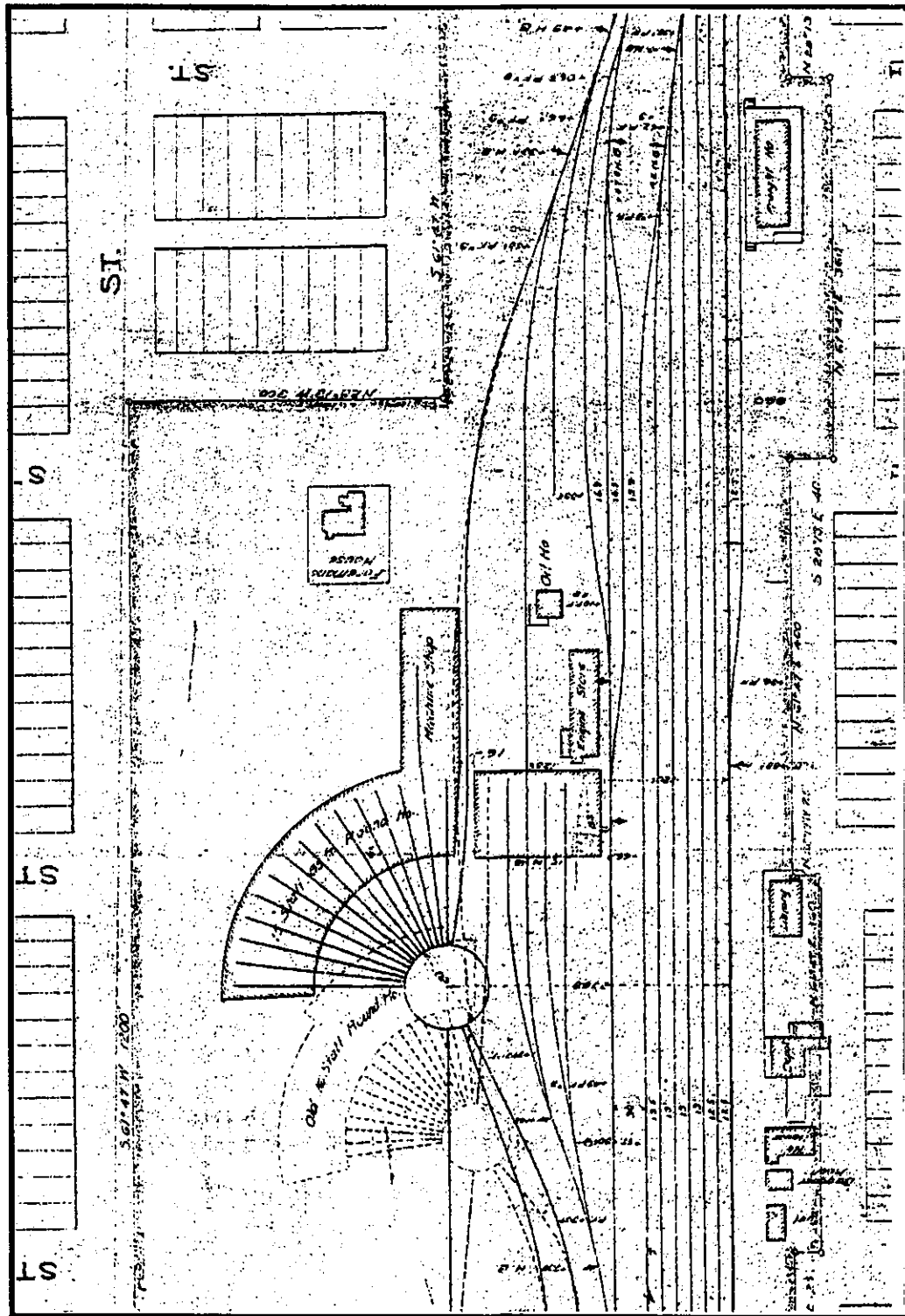


Carlin town plan, c. 1868-69. Source, Northeastern Nevada Museum, Elko.

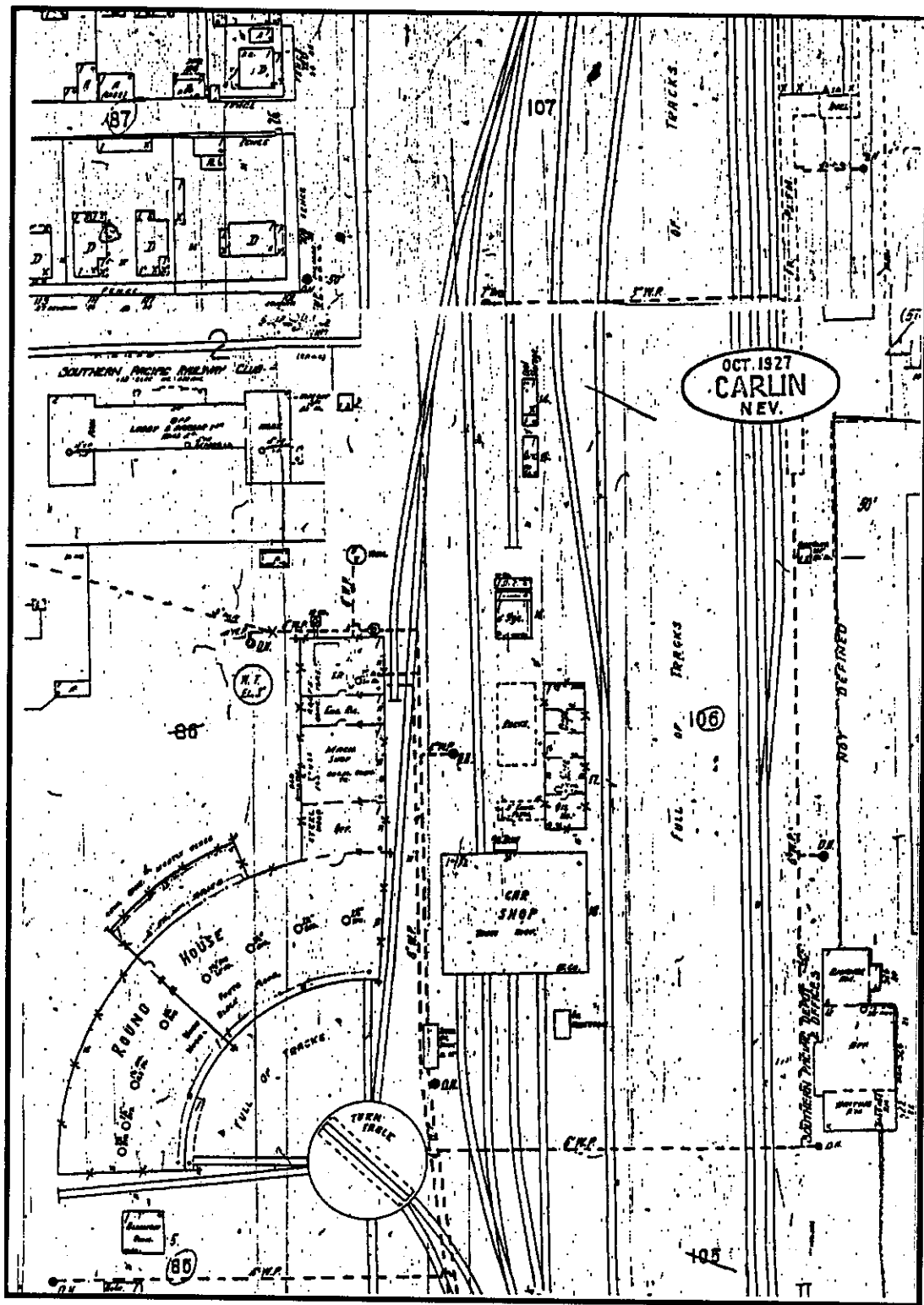


Carlin Shops, 1869, view to west. Car Shop building at center. Source, Southern Pacific.





Carlin Shops, 1905 site plan showing new roundhouse. Source: Southern Pacific, courtesy Huntington Library.



Carlin Shops, October 1927. Source: Sanborn Map Co., Courtesy Nevada Historical Society.